Multimedia

Standards, Competencies, & Evidence of Mastery

This document accompanies the Missouri Multimedia Instructional Framework and lists the standards and competencies from the National Standards for Business Education relevant to the Missouri Multimedia Instructional Framework. Also included are evidence of mastery statements aligned to the instructional framework. The standards and competencies are listed and coded according to their order in the National Standards for Business Education, published by the National Business Education Association. Evidence of mastery statements are coded according to the Multimedia Instructional Framework.

Codes for the National Standards for Business Education are as follows:

CD = Career Development   IT = Information Technology
COMM = Communication   M = Management

Career Development

CD V: Standard: Develop strategies to make an effective transition from school to career.

CD.V.B.3.3: Competency: Develop a career portfolio of items including resumes, sample cover letters, letters of recommendation, examples of work and technical skills, awards, and documentation of extracurricular activities and community service activities.

I.7: Evidence: Demonstrate mastery through work samples.

Communication

COMM I: Standard: Communicate in a clear, complete, concise, correct, and courteous manner on personal and professional levels.

COMM.I.B.2.1: Competency: Organize thoughts to reflect logical thinking before speaking.

G.2: Evidence: Identify components of effective electronic presentations.

COMM.I.B.2.8: Competency: Exchange ideas in a formal/informal setting.

A.5: Evidence: Use organizational skills to plan multimedia products (e.g., storyboarding, outlining, scripting, task delegation).

COMM.I.B.3.2: Competency: Organize and lead discussions.

I.4: Evidence: Exhibit leadership skills through a student organization (e.g., FBLA, PBL).

COMM.I.B.3.3: Competency: Preside at meetings.

I.4: Evidence: Exhibit leadership skills through a student organization (e.g., FBLA, PBL).

COMM II: Standard: Apply basic social communication skills in both personal and professional settings.

> **COMM.II.A.3.13: Competency:** Use leadership abilities in a business setting.
>
> > **I.4: Evidence:** Exhibit leadership skills through a student organization (e.g., FBLA, PBL).

COMM III: Standard: Incorporate appropriate leadership and supervision techniques, customer service strategies, and personal ethics standards to communicate effectively with various business constituencies.

> **COMM.III.C.2.2: Competency:** Organize and lead informal groups.
>
> > **I.4: Evidence:** Exhibit leadership skills through a student organization (e.g., FBLA, PBL).
>
> **COMM.III.C.3.3: Competency:** Plan, organize, and conduct meetings to achieve identified purposes.
>
> > **I.4: Evidence:** Exhibit leadership skills through a student organization (e.g., FBLA, PBL).
>
> **COMM.III.C.3.7: Competency:** Seek opportunities to practice leadership techniques.
>
> > **I.4: Evidence:** Exhibit leadership skills through a student organization (e.g., FBLA, PBL).

COMM IV: Standard: Use technology to enhance the effectiveness of communication

> **COMM.III.3.8: Competency:** Enhance documents through the use of advanced layout, design, and graphics production software and scanning hardware.
>
> > **A.6: Evidence:** Apply design principles used in multimedia productions.

Information Technology

IT II: Standard: Describe current and emerging hardware; configure, install, and upgrade hardware; diagnose problems; and repair hardware.

> **IT.II.1.1: Competency:** Identify hardware devices appropriate for specific tasks.
>
> > **A.3: Evidence:** Utilize hardware to manipulate various types of media (e.g., cameras, microphones, graphic tablets).
> > **A.8: Evidence:** Evaluate and determine hardware and software required for multimedia use.
>
> **IT.II.1.4: Competency:** Evaluate the capabilities and limitations of hardware for user needs.
>
> > **A.8: Evidence:** Evaluate and determine hardware and software required for multimedia use.
>
> **IT.II.1.6: Competency:** Identify examples of emerging hardware technologies.
>
> > **A.8: Evidence:** Evaluate and determine hardware and software required for multimedia use.
>
> **IT.II.2.5: Competency:** Compare and contrast various storage options (e.g., local, removable, remote).
>
> > **B.5: Evidence:** Utilize storage devices (e.g., CD/DVD, portable storage devices).

IT III: Standard: Identify, evaluate, select, install, use, upgrade, customize, and diagnose and solve problems with various types of operating systems and utilities.

IT.III.1.1: Competency: Navigate the basic operating system.

B.2: Evidence: Develop electronic file management systems (e.g., project folders, file naming).

IT.III.1.2: Competency: Manage files and folders.

B.2: Evidence: Develop electronic file management systems (e.g., project folders, file naming).
B.6: Evidence: Manage electronic file storage/transfer (e.g., online, Bluetooth).

IT IV: Standard: Use various input technologies to enter and manipulate information appropriately.

IT.IV.1.1: Competency: Develop proper input techniques (e.g., keyboarding, 10-key touch pad, scanning, speech recognition, hand typing, digital inking, digital cameras, student response systems, and the use of a touch screen, mouse, or stylus).

C.1: Evidence: Acquire and import images from a variety of sources (e.g., scanners, cameras, phones).

IT.IV.2-4.2: Competency: Apply a variety of input technologies to maximize productivity.

F.1: Evidence: Develop pre-production documents (e.g., storyboard, shot list).
F.2: Evidence: Apply basic filming techniques (e.g., camera angles, camera movement, lighting, sound).

IT.IV.2-4.4: Competency: Compose documents using a variety of input technologies.

F.1: Evidence: Develop pre-production documents (e.g., storyboard, shot list).
G.4: Evidence: Import files into a presentation (e.g., text, images, audio, video).

IT V: Standard: Identify, evaluate, select, install, use upgrade, and customize productivity software; diagnose and solve software problems.

IT.V.1.1: Competency: Identify productivity software appropriate for specific tasks.

A.4: Evidence: Determine appropriate software application for task.

IT.V.1.3: Competency: Prepare projects that include a variety of media (e.g., images, text, video, and audio).

G.4: Evidence: Import files into a presentation (e.g., text, images, audio, video).
G.7: Evidence: Deliver a presentation using professional standards and techniques.

IT.V.2.2: Competency: Use help features and reference materials to learn software and solve problems.

A.1: Evidence: Develop vocabulary related to multimedia.
A.4: Evidence: Determine appropriate software application for task.

I.6: Evidence: Use help tools (e.g., technical manual, on-line help, technical support).

IT.V.3.1: Competency: Compare and contrast productivity software features from different providers.

G.6: Evidence: Export presentation to various formats (e.g., .ppt, .jpeg, .html).

IT.V.3.5: Competency: Use advanced features of productivity software.

A.7: Evidence: Create text using typography principles.

B.4: Evidence: Convert files to various formats (e.g., .flv to .avi, .mov to .wmv, .psd to .jpg).

C.2: Evidence: Apply appropriate resolution settings for intended use of image.

C.3: Evidence: Apply appropriate image mode for intended application (e.g., convert RGB, CMYK, grayscale).

C.4: Evidence: Compose images using layers and selections.

C.5: Evidence: Edit images (e.g., color, filter, tint, contrast, brightness).

C.6: Evidence: Manipulate images (e.g., mask, resize, crop, scale, group/ungroup, zoom, and pan).

D.2: Evidence: Rip and import audio from a variety of sources (e.g., CD/DVD, video, Internet).

D.4: Evidence: Mix audio (e.g., layering, trimming, level adjustments).

D.5: Evidence: Apply effects to audio (e.g., noise reduction, amplify, echo).

D.6: Evidence: Export audio files based on delivery method.

D.7: Evidence: Apply editing techniques.

E.1: Evidence: Create frame-by-frame animations.

E.2: Evidence: Create reusable symbols (e.g., button, movie, graphic).

E.3: Evidence: Apply motion and shape tweens.

E.4: Evidence: Modify bitmaps (trace bitmap, convert to symbol).

E.5: Evidence: Use layers and object modification techniques (e.g., transform, alpha transparency, filters).

E.6: Evidence: Add interactivity to animations with buttons, menus, and scripting.

E.7: Evidence: Explore advanced animation techniques (e.g., 3D).

F.3: Evidence: Access, capture, and import a variety of file sources converting file types, if necessary (e.g., audio, video, graphics).

F.4: Evidence: Arrange video clips, audio clips, titles and still images on timeline.

F.5: Evidence: Manipulate clips (e.g., link/unlink, adjust transparency, set properties, trim, adjust speed/duration).

F.6: Evidence: Apply special effects, transitions, key frame/motion settings, animations, filters, and text.

F.7: Evidence: Synchronize audio with video. Apply advanced editing techniques (e.g., split screen format, chromakey, audiopan).

F.8: Evidence: Apply advanced editing techniques (e.g., split screen format, chromakey, audiopan).

G.3: Evidence: Design linear and non-linear presentations (e.g., interactive game).

G.4: Evidence: Import files into a presentation (e.g., text, images, audio, video).

G.5: Evidence: Apply advanced editing techniques (e.g., build, effects, timing, animation, transitions).

G.6: Evidence: Export presentation to various formats (e.g., .ppt, .jpg, .html).

IT.V.3.6: Competency: Evaluate the effectiveness of software to solve specific problems.

A.8: Evidence: Evaluate and determine hardware and software required for multimedia use.

F.9: Evidence: Evaluate sources for playing completed video (e.g., hardware, software, web applications).

G.1: Evidence: Identify a variety of presentation software (e.g., Prezi, Empressr, PowerPoint, Open Office Impress, Apple Keynote, NXPowerlite).

IT.V.4.4: Competency: Select and integrate productivity software products appropriate for various computer platforms.

A.4: Evidence: Determine appropriate software application for task.

IT.V.4.5: Competency: Identify, evaluate, and select software specific to an organizational function and/or industry.

G.1: Evidence: Identify a variety of presentation software (e.g., Prezi, Empressr, PowerPoint, Open Office Impress, Apple Keynote, NXPowerlite).

IT VI: Standard: Use multimedia software to create media rich projects.

IT.VI.1-2.1: Competency: Select and apply multimedia software appropriate for specific tasks.

A.4: Evidence: Determine appropriate software application for task.

D.1: Evidence: Compare and contrast audio formats common size and quality (.mp3, .wav, .midi).

G.1: Evidence: Identify a variety of presentation software (e.g., Prezi, Empressr, PowerPoint, Open Office Impress, Apple Keynote, NXPowerlite).

IT.VI.1-2.2: Competency: Use multimedia software to create projects to enhance academic achievement across the curriculum.

C.7: Evidence: Create original artwork using illustrative software.

IT.VI.3.1: Competency: Identify and select appropriate multimedia file formats and properties (e.g., plug-ins, codecs, compression).

B.1: Evidence: Identify types of files used in multimedia applications (e.g., .gif, .jpg, .ai, .psd, .png, .avi, .wmv).

IT.VI.3.2: Competency: Create multimedia content and prepare it for delivery (e.g., compression, resolution).

D.3: Evidence: Create original audio (e.g., voice, instrument).

D.7: Evidence: Apply editing techniques.

F.3: Evidence: Access, capture, and import a variety of file sources converting file types, if necessary (e.g., audio, video, graphics).

F.10: Evidence: Apply codec (compression) appropriate for the media delivery.

F.11: Evidence: Export presentation to various formats (e.g., .ppt, .jpg, .html).

> **H.2: Evidence:** Utilize web-based technologies to publish media (e.g., screencasts, podcasts, vodcasts, iTunes).

IT.VI.3.3: Competency: Configure multimedia delivery tools (e.g., blogs, podcasting, webcasting).

> **F.11: Evidence:** Export video for a variety of media outlets (e.g., broadcast, web).
>
> **H.1: Evidence:** Utilize and create collaborative electronic tools (e.g., wikis, blogs, forums).
>
> **H.2: Evidence:** Utilize web-based technologies to publish media (e.g., screencasts, podcasts, vodcasts, iTunes).

IT.VI.4.2: Competency: Build multimedia delivery systems (e.g., blogs, podcasting, webcasting, streaming media servers).

> **F.12: Evidence:** Author DVD.
>
> **H.2: Evidence:** Utilize web-based technologies to publish media (e.g., screencasts, podcasts, vodcasts, iTunes).

IT VIII: Standard: Gather, evaluate, use cite, and disseminate information from technology sources.

IT.VIII.1.1: Competency: Use a wide variety of information technology resources to retrieve information.

> **B.3: Evidence:** Download files from various sources (e.g., audio, images, video, animation).
>
> **C.1: Evidence:** Acquire and import images from a variety of sources (e.g., scanners, cameras, phones).

IT.VIII.1.2: Competency: Evaluate the credibility and bias of information sources (e.g., sponsored and non-sponsored sources).

> **B.3: Evidence:** Download files from various sources (e.g., audio, images, video, animation).

IT XV: Standard: Describe, analyze, develop, and follow policies for managing ethical and legal issues in organizations and in a technology-based society.

IT.XV.1.1: Competency: Discuss basic issues related to responsible use of technology and describe personal or legal consequences of inappropriate use.

> **I.1: Evidence:** Compare copyright and patent laws for multiple media between educational and workplace settings (e.g., video, text, sound, pictures).

IT.XV.1.2: Competency: Explain the consequences of illegal and unethical use of information technologies (e.g., piracy; illegal downloading; licensing infringement; inappropriate use of software, hardware, and mobile devices).

> **I.1: Evidence:** Compare copyright and patent laws for multiple media between educational and workplace settings (e.g., video, text, sound, pictures).

IT.XV.1.3: Competency: Discuss copyright rules and regulations (e.g., images, music, video, software).

　　I.1: Evidence: Compare copyright and patent laws for multiple media between educational and workplace settings (e.g., video, text, sound, pictures).

IT.XV.1.4: Competency: Explain plagiarism and its consequences.

　　I.1: Evidence: Compare copyright and patent laws for multiple media between educational and workplace settings (e.g., video, text, sound, pictures).

IT.XV.2.1: Competency: Demonstrate legal and ethical behaviors when using information technologies.

　　I.2: Evidence: Demonstrate ethical behavior when designing multimedia applications.

IT.XV.2.2: Competency: Demonstrate the appropriate use of intellectual property.

　　I.2: Evidence: Demonstrate ethical behavior when designing multimedia applications.

IT.XV.3.3: Competency: Analyze legal and ethical dilemmas within the framework of current laws and legislation (e.g., virus development, hacking, threats, phishing).

　　I.1: Evidence: Compare copyright and patent laws for multiple media between educational and workplace settings (e.g., video, text, sound, pictures).

IT XVI: Standard: Develop the technical and interpersonal skills and knowledge to train and support the user community.

　　IT.XVI.1-2.2: Competency: Tutor others in information technology skills.

　　　　A.2: Evidence: Investigate the key principles in internet safety, security, and privacy.

　　IT.XVI.1-2.4: Competency: Develop Interpersonal skills.

　　　　A.2: Evidence: Investigate the key principles in internet safety, security, and privacy.

IT XVIII: Standard: Explore positions and career paths in information technology.

　　IT.XVI.1-2.3: Competency: Identify positions and career paths in the field of information technology and explore careers in information technology (e.g., field trips, guest speakers, job shadowing).

　　　　I.3: Evidence: Identify career/self-employment opportunities in multimedia production.

　　IT.XVI.3-4.4: Competency: Experience an information technology career (e.g., internship, volunteer, entry level job).

　　　　I.5: Evidence: Interact with industry professionals (e.g., guest speakers, field trips, job shadowing).

Management

M I: Standard: Analyze the management functions and their implementation and integration within the business environment.

M.I.A.2.1: Competency: Apply the decision-making process to business applications.

A.1: Evidence: Develop vocabulary related to multimedia.

F.1: Evidence: Develop pre-production documents (e.g., storyboard, shot list).

M V: Standard: Examine the role of ethics and social responsibility in decision making.

M.V.A.3.5: Competency: Identify guidelines for ethical decision making.

I.2: Evidence: Demonstrate ethical behavior when designing multimedia applications.

M.V.A.4.4: Competency: Demonstrate awareness of ethical responsibility to business professions and society.

I.2: Evidence: Demonstrate ethical behavior when designing multimedia applications.